



**LEGISLATIVE ASSEMBLY FOR THE AUSTRALIAN CAPITAL
TERRITORY**

**STANDING COMMITTEE ON ECONOMIC DEVELOPMENT
AND TOURISM**

(Reference: [Inquiry into drone delivery systems in the ACT](#))

Members:

**MR J HANSON (Chair)
MS S ORR (Deputy Chair)
MR M PETTERSSON**

TRANSCRIPT OF EVIDENCE

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WEDNESDAY, 27 MARCH 2019

**Secretary to the committee:
Mr H Finlay (Ph: 620 50129)**

By authority of the Legislative Assembly for the Australian Capital Territory

Submissions, answers to questions on notice and other documents, including requests for clarification of the transcript of evidence, relevant to this inquiry that have been authorised for publication by the committee may be obtained from the Legislative Assembly website.

WITNESSES

BALDING, MR PHILLIP **105**

CHARKER, MR CRAIG, Acting Executive General Manager, Air Navigation
Services, Airservices Australia **95**

DE RAADT, MR TIM, Senior Policy Adviser, Government Relations,
Airservices Australia..... **95**

KNAUER, MR MARCUS, Chief Air Traffic Controller, Airservices Australia **95**

RUCINSKI-STANEK, MR ADAM..... **105**

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Amended 20 May 2013

The committee met at 10.02 am.

CHARKER, MR CRAIG, Acting Executive General Manager, Air Navigation Services, Airservices Australia

DE RAADT, MR TIM, Senior Policy Adviser, Government Relations, Airservices Australia

KNAUER, MR MARCUS, Chief Air Traffic Controller, Airservices Australia

THE CHAIR: Good morning and welcome to the third public hearing of the Standing Committee on Economic Development and Tourism. We are inquiring into drone delivery trials in the ACT. On behalf of the committee, I thank Airservices Australia for attending today.

I draw your attention to the pink privilege statement before you on the table. It gives you an understanding of what you can and cannot say and the way that information is treated. I remind you that we are being recorded by Hansard for transcription purposes and also the proceedings are being webstreamed and broadcast live. Have you looked at the pink statement and are you across it?

Mr Charker: Yes.

THE CHAIR: Thank you. Before the committee goes to questions, do you have an opening statement that you would like to make?

Mr Charker: Thank you for the invitation to speak to the inquiry on drone delivery service in the ACT. I think probably the best way to proceed is for us to take questions to help you with understanding of Airservices' role in these and other sorts of matters. To give you a little context, in our area in Airservices we broadly look after air traffic control. We look after all the air traffic controllers across Australia and a number of the facilities and infrastructure that they use to deliver their services, as well as some other supporting areas.

THE CHAIR: This is the third public hearing. We have received a lot of submissions. It certainly appears to me that this is a piece of technology that perhaps does not necessarily have the same level of regulation, that perhaps the regulation is chasing the technology. In particular, I am concerned about noise. We are trying to track down where the regulations around noise are. Who is responsible for that?

My reading of it, based on your submission and on CASA and others appearing, is that there are noise regulations but that they are in regulated airspace, controlled airspace, which is around airfields and aircraft flying over a certain height. But if we have a drone flying in a suburb, are they responsible for the noise? Going beyond noise, what I would be interested in is this: where do you see that your remit starts and ends? Does that impact on drones that might be flying in a suburb some distance from an airfield?

Mr Charker: Yes, that is an insightful statement. Drones are a growing market and how we sort of manage it is evolving over time. The growth in these areas is significant. I think we had globally around 150,000 drones in the world in 2016 with a projection of around 24 million in 2031, those sorts of figures.

Airservices operates under the Air Services Act. Of course, we have a primacy of safety there. How we perform our services is to ensure that the safety of air navigation is the most important consideration. The manner in which we perform our functions includes broadly that we protect the environment from the effects of aircraft operations. So in both controlled and uncontrolled airspace, if you are happy that I use those terms as we go through, please ask if you have any questions.

THE CHAIR: Sure.

Mr Charker: We provide a number of services. We provide a lot more services obviously in controlled airspace. We generally provide fewer services in uncontrolled airspaces. Obviously, our knowledge of and influence and control over what is happening in controlled airspace is quite good. We understand in a lot of detail what is happening around Sydney and certain places like that. We have lot of systems, processes and procedures for how we manage that.

At an uncontrolled airport—I am trying to put it into context—such as Goulburn or somewhere like that, we have less knowledge of what is happening there because predominately those airports are used for recreational-type flying, private operations and things like that.

A lot of our functions, and then how we sort of manage those environmental obligations, revolve around the controlled airports and where we have flights operating under instrument flight procedures. They are flying on designated tracks, not exclusively, but in general terms they are flying under specific tracks. We are able to define those tracks. Those tracks and flight paths are there, again, predominantly for safety.

THE CHAIR: What is the act or regulation that you work under?

Mr Charker: The Air Services Act and there is a suite of regulations underneath.

THE CHAIR: What about the Air Navigation (Aircraft Noise) Regulations 2018?

Mr Charker: Under section 16 of our act we have the capability to get a direction from the minister. We have a direction underneath that that has a role for us in regard to how we provide some services under the noise regulations and so on. That predominately revolves around, if you like, the VH-registered aircraft, Australian registered aircraft, that have certificates of airworthiness. For example, when a new aircraft comes on to the register in Australia, we have an area that will look at that aircraft to determine the noise footprint and whether the noise complies with those regulations.

THE CHAIR: Under the act and then the regs, specifically the Air Navigation (Aircraft Noise) Regulations 2018, is the type of drone being operated by Project Wing subject to that act? On my reading of that act, it does not exclude a drone, or does it?

Mr Charker: Did you want to respond to that, Tim?

Mr de Raadt: It is a CASA-administered act. So in terms of your question, I think they would probably have the interpretation of that answer. Our role—correct me if I am wrong—is certification of the aircraft under that act.

Mr Charker: Yes, but within that scope, we are not undertaking certification of drones in that sort of context. They do not have a certificate of airworthiness in general terms. They have a certificate of airworthiness but we are not routinely providing that certification for non-Victor Hotel Australian registered aircraft that are—

THE CHAIR: When CASA witnesses were here, certainly the impression I had—I will have to go back and re-read the transcript—was that their remit was safety and that Airservices then were, sort of, aircraft noise. I know that that might be a simplistic way of breaking it up. I am a bit confused then as to why the Air Navigation (Aircraft Noise) Regulations would be CASA rather than Airservices.

Mr Charker: Yes, the Civil Aviation Act has very similar wording in relation to “environment” as ours. I will just paraphrase some of it. In ours, it is stated that Airservices:

... must exercise its powers and perform its functions in a manner that ensures that, as far as is practicable, the environment is protected from ...

Then we work through the effects of aircraft operations. The Civil Aviation Act states:

... CASA must exercise its powers and perform its functions in a manner that ensures that, as far as is practicable, the environment is protected from:

(a) the effects of the operation and use of aircraft; ...

We probably provide more functions underneath that, particularly around the fact that we have a ministerial direction to provide what was called then a noise inquiry unit, which we now call the noise complaint information service. We provide advice to the community under that. We receive noise complaints under that direction. We also take some functions underneath those noise regs as well around certification and those sorts of things. We also look at some of the planning sort of aspects as far as—what does ANEF stand for these days?

THE CHAIR: Can I just cut in with a simple question before I hand over to the deputy chair? Who is responsible for the noise of drones, the sort of drone that Project Wing is flying in suburbs in Canberra at the moment, and under what act? If the answer is no-one, the answer is no-one. If there is a gap there, then we need to know that as well. But what we are trying to do is chase down whose responsibility this is, because at the moment nobody seems to want to put their hand up, be it the ACT government, CASA, Airservices or anyone to say that “they” are responsible and this is the piece of legislation or regulation that gives the power to actually control the noise of these aircraft. Safety is a little different. But is there somebody putting their hand up and is there a reg or an act under which they are empowered to do so?

Mr Charker: This is a bit of a roundabout way to answer the question, but the issue we have is that, except for drones that are operating within three miles of an airport and above 400 feet, we do not have any interaction with them. If CASA has officers looking to approve an operation that is close to an airport, they will talk to us and we will look at how we are going to manage that. For something away from the airport, we do not get involved in that at all. In that context, our ability to influence or control any sort of

noise outcomes is difficult when we do not have—

THE CHAIR: Sure. Does the regulation specify distances from airports or is that something you have imposed on yourself?

Mr Charker: So CASR part 101 talks about—I think in reading CASA’s testimony they use real estate agents as an example for different suites of approvals for different types of operations of drones—in general terms, three nautical miles as being where we can stay away from the airports. Outside the airports—

THE CHAIR: So, in simple terms, is your answer that no-one is responsible and there is no legislation or regulation? Is it accurate to say that? At the moment you are not saying CASA is and you are not saying you are. There are constitutional issues, as I am aware. They are a bit vague at the moment about what the state or territory governments can do.

Mr Knauer: Returning to your point about the regulation, those certifications that Mr Charker was talking about are assessed for aircraft above 150 kilograms. Typically drones, obviously, are not that large. We therefore do not assess the impact of noise when we are conducting our activities on that. It was CASA’s view as well that these standards were based on ICAO standards that are included in the regulation, and those ICAO standards do not include drones.

MS ORR: Are you aware of a standard anywhere in the world for drone noise and the regulation of drones?

Mr Charker: No. There is no International Civil Aviation Organization, ICAO, standard on drone noise.

MS ORR: Is ICAO working on anything?

Mr Charker: ICAO has a number of work groups there.

Mr Knauer: A number of working groups are formed under the umbrella of ATM operations which have RPAS as one of their working groups. What they are working on in those groups, whether it is noise specifically, I do not know. I do not necessarily understand if that is a focus of that particular working group.

MS ORR: My understanding from the previous line of questioning is that Airservices is focused on prescribed airspace and three nautical miles within that prescribed airspace. Is that correct, or have I misunderstood something?

Mr Charker: In the context of drones and their approval you are correct. That is our focus as to how we are safely integrating those operations into and around airports and so on. Broadly our role is much larger than three nautical miles around an airport, as you understand, but in the context of drones that is where our people are giving approvals and so on to operate.

MS ORR: And noise monitoring is for anything over 150 kilograms; did I understand that correctly?

Mr Knauer: That is the certification process that they go through in terms of assessing aircraft and their noise levels. Our noise monitoring in and around our eight major airports is focused on the arrivals and departures of aircraft into and out of those aerodromes in and around the community.

MS ORR: My substantive line of questioning goes to how you measure noise from aircraft, the standards we have and how those might differ for drones, because they use a different flying pattern. Can you run us through what you do to monitor noise and how easily or not easily that would be applied to drones.

Mr Charker: I will talk about the monitoring of noise. Stop me if I go off on the wrong tangent here. We have a noise flight path monitoring system around Australia. We have 40-odd, I think, sensors around Australia. They are based around the major airports. That is where we have lots of operations of lots of—I will not say noisy—different noise-footprint aircraft. Particularly around Sydney and all those other capital cities we have a noise flight path monitoring system where we are able to record the noise footprints and we are also able to correlate that back to which aircraft it is. We make that publicly available on our website through a system called WebTrak, where the public can come on and see flights coming past. The noise monitors are noted on there, and they are able to see how many decibels those flights are being recorded at as they pass around those noise monitors.

MS ORR: What I am really trying to get to is whether there is much of a difference between monitoring the noise of an aircraft as opposed to a drone.

Mr Charker: I am no expert on noise attenuation and so on. I think one of the issues with a drone, particularly in the types of operations we have been talking about here, is that it is not putting out high levels of decibels. There is a certain pitch that those drones may emit. The big one, obviously, is that a drone tends to come a lot closer, in general terms, to your house or my house than a standard, conventionally piloted aircraft does. It just comes a lot closer. Even a small aircraft that may be flying around the area is generally going to be up at 1,000 feet or something like that. When a drone is delivering something within 100 metres or 50 metres from you, or something like that, it is a different noise experience, I think.

MS ORR: So taking some of the existing standards and just applying them to drones would not necessarily get you a suitable outcome?

Mr Charker: Standards—I am not sure what the question—

MS ORR: As in noise standards: X number of decibels is acceptable between this time and that time, and those sorts of things.

Mr Charker: It would be difficult, I think. We have not done a lot of noise measurements, as we talked about earlier, of drones and how many decibels they are emitting. Most of our work in this sort of space is concentrated at the major airports and looking at what a conventionally piloted aircraft is emitting.

Mr Knauer: The other thing in assessing that is that when we are measuring noise we

are not measuring just the volume of noise but also measuring the length for which that noise is impacting on a particular environment. So the difficulty, I think, with the drones is that it is probably more of an isolated noise and, when you are trying to monitor and identify the cause of that noise, the monitors are assessing the environmental noise holistically. You might have a car driving past a particular monitor that drowns out the noise of a drone at a particular monitor site. So I think that in applying the same standards there would be some practical difficulties in being able to monitor them.

Mr Charker: To give a little more context on that, as we go about inevitable changes to flight paths that we are looking at around multiple airports, which can be smaller regional airports or capital city airports, we will work our way through a process there. I am talking now around instrument flight procedure flights and the instrument flight procedures that they work through. As we do that, we will look at where we think these flight paths are going to go, what expected number of flights we have seen historically and what we might project, what those flights are and how many decibels we would normally expect them to put out. And we will try to design some flight paths that minimise the outcome to the community while maintaining its safety.

We also have obligations for promoting and fostering civil aviation. So we try to find a compromise: something that minimises the environmental impact there while achieving an outcome that is what we are looking for. Based on that, we have our own internal set of criteria. At what point do we need to start thinking about the EPBC Act and so on? Is this a significant sort of activity? We try to screen out, based on a number of criteria, which include day and night operations and whether the area is rural or residential, just what their noise exposure is currently.

We would take something like that, do an assessment based on that and take it out to the community at varying levels of engagement. If we think it is a big thing then we will be out in the community to talk to them and so on. If it is a relatively small change we might just bring people to be aware of it through our website and so on to try to give them an idea of what it is. We would seek feedback from the community on that change and consider what we have got there. Is there anything we did not know as we went on the way through? Is there a last-minute change or something else we can change to improve the outcome a bit? Then we would proceed to implementation.

MS ORR: Am I right in my understanding that Airservices does not develop the noise standards: it applies them to the flight paths and prescribed airspaces within Australia and you monitor to make sure that what you have anticipated will be the noise level is what is going on?

Mr Charker: I have split the standards a bit as I have gone through. The standard for what an aircraft is emitting is one piece. That is an interesting point insofar as we simply bring an aircraft into Australia and get it certified, and it is emitting a certain level of noise if it is flown once a year compared to if it is flown six hours a day constantly. So there is the standard aircraft and then there is the actual outcome that people are going to experience through that.

From a standards perspective, Australian Standard 2021 is probably the most comprehensive standard; a bit like what I talked about earlier with the ANEF that is developed for an airport: where the curves fit, what type of building you would

normally put in at ANEF 20 to 25, and those types of things. That is the standard that is there. Then for other changes, as I have alluded to, we go through things that we control. We work through our processes to determine what the real environmental risk there is, how we are able to minimise the effect on the environment, whether we think it triggers enough that we need to consider it under EPBC and so on.

MS ORR: The standard you were referring to there, 2021, is not actually for the noise produced by the aircraft; it is for what you would build within an ANEF footprint. Is that correct?

Mr Charker: Yes.

MS ORR: It has been suggested to the committee that if no-one else is going to monitor noise then the ACT government should and they should put in place regulations. Is there anything from a practical and implementation point of view that you see being problematic given that the noise generated by drones is quite complex and there are not a lot of precedents?

Mr Charker: A number of third-party providers measure a lot of noise. From a feasibility perspective, it is probably feasible. As to the outcome that is going to be achieved, yes, you can measure what the noise experience is. Again, in a very localised area that could potentially end up looking like a lot of noise monitors. We do not routinely put out a lot of noise monitors everywhere because we are targeting those areas of greatest need where the greatest noise is, where we receive the greatest number of complainants.

THE CHAIR: Without saying we are going to monitor a particular flight path, a third-party provider would be able to say, "Okay, this particular drone when it is hovering at 10 metres," or whatever the distance is, "is making a certain noise," and so you could put in a reg or something about drones that hover at 10 metres or whatever; you could monitor what noise is put out by a particular craft. So you could then say no drone that emits X decibels is to fly below 10 metres or something. Providers can measure that sound, right?

Mr Charker: The difficulty with hovering drones is probably the ambient noise as far as what is being experienced: was that a drone, was it a truck, was it a car? We have had examples in the past of a bird in the wrong spot chirping and really hitting the microphone.

THE CHAIR: If you heard one of these drones you would know it was a drone.

Mr Charker: I know what it is, but when you are recording the number of decibels it becomes a little harder.

Mr Knauer: One of the challenges you will face is that it will be difficult to identify, in an uncontrolled environment potentially who the operator of that drone is. It is okay where you are conducting a trial and you know who the operator is but one of the questions the government is considering in a policy sense is how you might address it. Largely you are will be operating on the goodwill of the operators in terms of potentially declaring who they are in an uncontrolled environment.

THE CHAIR: CASA announced this morning—I saw it on the ABC—that they are going to register drone operators for drones beyond a certain size.

Mr Knauer: That for me is one of the things you would need to contemplate in terms of a policy.

THE CHAIR: I suppose what we are looking for is whether the ACT government can then say, “Okay, if drones are going to be flown in the ACT they have to comply with certain noise standards however we structure that.” You might have to measure them in a controlled space as part of a registration process rather than trying to go out into the field and capture drones as they are flying around.

Mr Knauer: Registration is one aspect of it. But even though they may be registered you still have to be able to identify who was operating them at the time. CASA will have a record and you then need to be able to identify, on the other end of that, who was operating that drone. That is another challenge for you.

Mr Charker: It is difficult if we are trying to track and measure those drones. Registration helps with who owns what drone and what qualifications potentially they have to operate the drone, but once the drone is in the air and flying, unless there is some sort of surveillance, it is pretty hard to read the registration etched onto the side of them through that process.

THE CHAIR: You might be able to regulate and put something around it, but then enforcing those regulations becomes a challenge.

Mr Charker: Yes.

MS ORR: Who would have the jurisdiction for enforcing any regulation put in place on noise from drones?

Mr Charker: If CASA were to move down that path it would be CASA’s set of regulations to enforce. It would be similar to if I am operating an unregistered drone there would be an enforcement piece underneath that. If someone does not hold a qualification, for argument’s sake, it would sit underneath that suite.

MR PETTERSSON: What is the process when you receive a noise complaint about aircraft?

Mr Knauer: We have a noise complaint and information service. If someone wants to make a complaint about a particular aircraft noise they will contact us. We will have a look at it and if we have enough detail we have the ability to follow that up with the operator, for want of a better word, to get an understanding of why they may have potentially been deviating from the operation we were expecting. That is okay where we have the detail of that operator.

If we do not have enough detail all we can really do is give the complainant the understanding of what the process is and how we might be able to address their concerns. If we cannot satisfactorily address their concerns they have the opportunity to escalate

that complaint to the ANO for them to have a look at how we dealt with that complaint.

MR PETTERSSON: So you speak to the person operating that service and check to see if it was them. What happens if the person providing that service was in the wrong? What are the repercussions?

Mr Charker: I am trying to think of an example in that sort of context.

MR PETTERSSON: I assume that there are noise complaints when someone has done something inappropriate or not in line with what was expected.

Mr Knauer: I think that the process is that we would probably escalate that through to CASA. Any enforcement action would need to be taken under their regulations. We have no authority.

MR PETTERSSON: What kind of enforcement actions are you talking about there? Are you talking fines or what?

Mr Knauer: I think the term is aviation infringement notices.

Mr Charker: For a theoretical example, we may receive a complaint from an uncontrolled airport of an aircraft flying low in certain areas. In most cases we have very little actual information about what is going on whereas if we receive a complaint about operations at Sydney we can provide quite a lot of information around what is happening.

In that context if we had verified information that aircraft VH-ABC is operating low or aerobatic or something like that, we would take that complaint and pass that on to CASA. CASA may look at that through their inspector system of what is happening at that airport and how that aircraft is being operated. CASA are very interested in the safety. The reason they have low-flying rules et cetera is to ensure the safety of the operations, and they may then prosecute that operator under the various CASRs around not flying how they are supposed to, so to speak.

MR PETTERSSON: So are you saying that anyone making noise by flying low to the ground has to be flying unsafely to be punished in some form?

Mr Charker: Yes, so in that example CASA would be looking at their various regulations for the operation of aircraft and whether they are those operations. If the complaint was, for example, that a person is flying illegally but is flying 12 hours a day every day because they just love flying, CASA would have a lot of difficulty because the person is not doing anything wrong per se under the regulations. They are emitting a large amount of noise at an uncontrolled airport, but if they are not breaching any regulations in that context then there would not be any enforcement action there.

MR PETTERSSON: Can we focus on the specific example of someone breaching sound regulations? What happens in that circumstance? There was reference before to an aviation infringement notice.

Mr Knauer: I may have got the term wrong, but it is administered by CASA. So to the

extent that they would prosecute on a particular scenario, that is probably a question CASA is better positioned to answer because it would be their enforcement action.

Mr Charker: I am trying to work from the example. If for some reason the aircraft did not comply with the noise regulations—I am not an expert on noise regulations—because it was imported and had not gone through the certification process, then I guess that would be a breach underneath those regulations.

MR PETTERSSON: Are you aware of any aircraft noise infringements?

Mr Charker: I have an anecdotal one from about 10 years ago which I can barely remember the details of. That was one aircraft that was particular noisy in the context of the tips of the props were going through the sound barrier and things like that. I cannot remember the details of it.

Mr Knauer: Again, enforcing those notices is not within our remit. I am not aware of any of them. In terms of who administers those, again, it would be a question for them.

MR PETTERSSON: Controlled airspace starts at 400 feet. Is there a particular reason for that?

Mr Knauer: Controlled airspace does not necessarily start at 400 feet.

MR PETTERSSON: Apologies.

Mr Knauer: That is okay. So, in simple terms, you could describe controlled airspace as an upside down wedding cake in terms of the tier as it funnels into a major airport. The 400 feet is a reference to the restriction on operations of drones within a three nautical mile radius of an aerodrome so that it does not impinge on that controlled airspace.

Mr de Raadt: Could I just clarify, you asked earlier about the air nav aircraft noise regulations and I may have implied that we did not have any responsibility. That is not true; it is jointly administered. My understanding is that CASA has a piece, I believe the Department of Infrastructure, Regional Development and Cities also has some part underneath this legislation and we do as well. So my answer may have implied otherwise.

THE CHAIR: I am curious because it has been suggested that what Project Wing is doing as part of this trial would engage that regulation, so I am trying to work out if it does or not. We may follow that up separately; I am just trying to identify the correct agency to discuss that with. It might be a matter of going to the minister responsible. Thanks for that clarification.

Thanks for appearing today. You will be sent a copy of the draft transcript to check that it reflects what you said and what we said. If we have any follow-up we might be in touch with you, but otherwise thank you for attending today.

**RUCINSKI-STANEK, MR ADAM
BALDING, MR PHILLIP**

THE CHAIR: Good morning and welcome. Thank you for coming to what is the third public hearing, and I think probably the final public hearing, of the economic development and tourism committee's inquiry into drone delivery trials in the ACT. I also thank you for your submissions provided previously. I draw your attention to the privilege statement. Can you confirm that you understand the implications of the statement?

Mr Rucinski-Stanek: Yes.

Mr Balding: Yes.

THE CHAIR: The proceedings are being recording and transcribed by Hansard. They are also being webstreamed and live broadcast. Before the committee goes to questions, I invite you to make opening statements if you chose to do so. There is no requirement if you do not want to.

Mr Rucinski-Stanek: I was a tester for the Wing drone delivery trial that happened in the suburb of Bonython. I guess I am here mostly because there has been a lot of this in the media, as you guys know. I am here to sort of present the other side of the argument, which has been mostly, I guess, more on the negative side. I am here to sort of balance it out somewhat and to give my point of view on the issue.

Mr Balding: I am a drone advocate, I suppose, for deliveries. I am a public servant and work in the Tuggeranong offices, so right next to the Bonython trial. I have seen the drones there. I went to get on board with his trial, get some deliveries and check out how it worked. We became a bit active about it because we were a bit upset by the people who were opposing the drone deliveries, the trial and that sort of thing. So we just tried to kind of drum up some people to get involved.

THE CHAIR: I turn to you first, Mr Rucinski-Stanek. One of the big issues that seems to have been raised by people who have concerns is that of noise.

Mr Rucinski-Stanek: Sure.

THE CHAIR: You have used this; you are aware of the particular noise that these drones make.

Mr Rucinski-Stanek: Yes.

THE CHAIR: Did you receive any comments, adversely or not, from neighbours? Do you have close neighbours?

Mr Rucinski-Stanek: Yes.

THE CHAIR: Has anyone said that they are concerned by it?

Mr Rucinski-Stanek: Actually, most comments and discussions I have had about the noise levels would have come from people in my own home and guests I invited to trial the service. I did discuss the topic with neighbours very briefly and noise was never brought up as an issue. It was more, I guess, the novelty and the newness of the concept. People were interested in it. Not that it was not a concern but it is just not something we touched on. But as far as discussions with family, before using it I guess there were concerns about the noise and then once they used it they realised how the drone system worked. It was not as harsh as they were expecting.

I guess the other concern from people in households related not just to when drones delivered to the household but also to other testers in the suburb and whether flying over would be loud and obstructive to daily life. Again that was not—once the trial went on for a few months—a concern.

THE CHAIR: Your particular experience is that you did not receive any sort of complaints?

Mr Rucinski-Stanek: No, no actual complaints to me.

THE CHAIR: Yes.

Mr Rucinski-Stanek: Not that I had, or concerns.

THE CHAIR: How many times do you reckon you used it?

Mr Rucinski-Stanek: Good question. I would have to open the app and check. But I think I got at least six or seven deliveries over the course of the trial.

THE CHAIR: What was your other experience with it?

Mr Rucinski-Stanek: I really enjoyed it. I guess that I am an advocate for new innovative technology. Yes, there is no shying away from the excitement of trying something new. That was really enjoyable. But to have an awesome choice of products to choose from, to have people over and to sort of share in that excitement of getting a delivery that is delivered by air—with super-quick deliveries and good processes—that was an exciting. It was an exciting thing to use; so I did try to use it as much as I could. It was not very often but—

THE CHAIR: Which products did you get? I am curious.

Mr Rucinski-Stanek: Yes, I only ever ordered the food, the burritos. I had no need for the Bunnings hardware or the chemist products. So I mostly had people over to try some of the burritos.

MS ORR: When you were getting the burrito deliveries, was it one drone delivering or did you have multiple drones, because if you have people over—

Mr Rucinski-Stanek: Sure, it totally depended on what your order was. If it was just one other person, it was two burritos and one drone would be enough. I had a big group of people over—I think six of us were there—and that was three separate drones that

came, just because they do have weight restrictions and balance requirements.

MS ORR: When you had the three drones coming in, one after the other or in quick succession, how did you find the noise then?

Mr Rucinski-Stanek: The same as one, I guess. It was not all at once. They staggered it. One delivery came; the hover dropped the delivery; and that one left. Then the subsequent one came in. It was sort of spaced apart; so it was not like a big loud all-at-once issue.

THE CHAIR: Mr Balding, you were one of the burrito tasters, were you?

Mr Balding: Yes.

THE CHAIR: Is that how we describe you?

Mr Balding: Yes. I have been to his house to check it out. I am very interested in it, because my household in Chifley orders a lot of food delivery through Uber Eats. Cutting down on costs would be really good. Plus, when the delivery person comes to the door it disrupts my dog; it barks at him. It would be good to actually have a drone come out the front instead. Yes, I am a big advocate for it. I want it to come to my suburb.

THE CHAIR: Basically, your view is that it would be quicker, cheaper and less disruptive without having to interact with someone at the door for deliveries?

Mr Balding: Yes, and I will point out as well that the noise issue is probably going to be redundant soon because of the new light drones that they are bringing out in Mitchell. You might have to ask all those questions again when it rolls out in Mitchell and it is quieter.

THE CHAIR: Yes, a couple of the committee members have actually heard the new drone.

Mr Rucinski-Stanek: How was it? Was it—

THE CHAIR: If you go on to RiotACT—I will give them a bit of publicity—they have actually got a video where it shows both before and after. So you can actually see that—

MR PETTERSSON: It is mainly the pitch that changes.

Mr Rucinski-Stanek: Sure.

MR PETTERSON: It is a quite different sound from what currently—

THE CHAIR: I would be interested in your views, because one of the concerns that has been raised to us is not necessarily the decibels but the high pitch.

Mr Rucinski-Stanek: Correct.

THE CHAIR: That sort of screeching noise. Do you have a view on that?

Mr Balding: Yes, hanging out the front, we saw deliveries four doors down and you can barely hear anything; like, there is a faint buzz. You can hear the hum of the highway more. It is really more annoying. I would say that anything past two doors down, it is not disturbing at all. Most Canberrans should have thick walls for the cold especially in the new suburb area that you are in.

Mr Rucinski-Stanek: On your doorstep, definitely you can notice it and it is loud as it is landing, as it activates those differ propellers but—

Mr Balding: We were still talking it over and stuff. I was surprised at the first delivery how not noisy it was compared to all the complaints that appeared, yes.

THE CHAIR: So there are restrictions in the trial in terms of the times of day they can fly. One of the purposes of this is the delivery of food, emergency-type medicines, Panadol, nappies or whatever, do you have a view on them flying after dark?

Mr Balding: If they are quiet I think they should be able to fly at any time.

THE CHAIR: So assuming the safety and noise issues are addressed?

Mr Rucinski-Stanek: Yes, assuming they can fly safely at night using the GPS and all of that and if people are happy with the noise levels they create, I think it should definitely be allowed.

THE CHAIR: Did you find that a restriction when you had a craving for a burrito and it was beyond the time limit and you could not order it?

Mr Rucinski-Stanek: Of course. Correct. So they restricted the times I am fairly sure for these concerns. I am not exactly sure, but I assume not flying at night is to alleviate disrupting people in their homes. It was generally during business hours and that is when I am at my full-time employment. There was actually a really narrow window in which I could use the service because of those restrictions.

THE CHAIR: So those time restrictions limit the functionality in a sense of what you are trying to achieve?

Mr Rucinski-Stanek: Correct, yes.

Mr Balding: Yes, we definitely want deliveries late at night or early morning on weekends, whatever.

Mr Rucinski-Stanek: Of course, if people need emergency batteries or medicine or whatever, that could happen in any time of day.

Mr Balding: Especially medicine. No-one wants to get up and go to the hospital in the middle of the night or look for a pharmacy.

MS ORR: Are you involved in any of the pro-drone Facebook groups or those sorts of

things that have popped up?

Mr Rucinski-Stanek: Yes, we both are.

MS ORR: Can you elaborate a little bit on some of the feedback you have received and what you have done with your advocacies on the feedback you have received?

Mr Balding: We started the Bonython for Drones Facebook group. We made it public so people would come and we could find out who was interested. We commented on a few of the *Canberra Times* articles and stuff saying, “Hey, join our group if you are interested,” so we got a lot of strangers come on. We have made posts and comments. A lot of people are on board and they are very upset about the opposition, Bonython against Drones and that sort of thing.

Mr Rucinski-Stanek: It was mostly an awareness-raising page. That was the aim.

Mr Balding: Yes, awareness raising. A lot of people were really keen for it to come to their suburb. People are keen for more of it to happen.

MS ORR: Have you had any interactions with Bonython against Drones? You obviously have two different views; has there been any discussion between you to try to understand each other’s sides?

Mr Balding: No, but there was a strange account that came on and abused us and I think that that was probably the leader of Bonython against Drones. I also had a formal complaint at work against me about the drone stuff, and that was definitely Bonython against Drones. They just dismissed it and said it was nothing to do with work so, yes. Another person commented abusing our stuff saying they really do not want drones and their privacy is going to be compromised.

THE CHAIR: There are obviously a range of views on this issue. But as you said at the start, you are someone who is enthusiastic about embracing new technology. There are always people who want to be first adopters and then there are people who are late adopters. It will have a different impact on people who have different views on technology.

Mr Balding: Of course.

MR PETTERSSON: Do you think there is a generational gap on this issue?

Mr Rucinski-Stanek: Yes and no.

Mr Balding: Wing did say that some old people were using the service. Some of the heaviest users were old people who could not leave the home and are not allowed to drive. So yes and no. I think maybe it is just like the older old people who cannot drive and stuff like that who are very on board. Maybe over the 60 age range?

Mr Rucinski-Stanek: I do not know. I am not sure. I am just speculating. It might seem like a generational thing. I think the communities are too small to be able to see if it is just general population or if it is something differentiated by a generation or an age gap.

There are enough people on both sides. There are definitely people in our generation who are for it but there would definitely be some people who are not. There are definitely people of all generations who support it and are against it.

Mr Balding: People our age like going to cafes and some say, “No, I don’t want drones around, I want to go out and have a nice experience in a restaurant,” and that sort of thing. And we say, “Okay, well, you can do that,” but when you want your fast food late at night this makes it more accessible. It is not just the cheaper delivery fee; it is also not bundling. Economics 101 is just price bundling. You do not get your chips and coke free with your McDonalds meal—it is bundling. When you are getting Uber Eats you are paying for a \$25 meal; you cannot just to get a small \$10 meal. You have to pay for the whole thing as well. Even though it is still a cheap delivery fee they are forcing you to buy a lot.

MR PETTERSSON: How do the delivery fees compare?

Mr Balding: Wing say they are going to be in the single dollar range, so fees of \$1 or \$2. Uber Eats is a \$5 fee but there will be no bundling with Wing.

Mr Rucinski-Stanek: Again, it is hard to say until the service is available I guess.

MR PETTERSSON: The prices that you were paying—

Mr Rucinski-Stanek: So as it was a trial there was no fee.

MR PETTERSSON: So it was \$13 or \$14 for a burrito?

Mr Rucinski-Stanek: Yes, it was whatever the price is for a standard burrito and then it was free delivery. I do not think that is indicative until the—

THE CHAIR: Until it is rolled out.

Mr Balding: Yes, and competition as well. Hopefully they do not have a monopoly. We want a few people competing to get down to the \$1-fee range.

Mr Rucinski-Stanek: If you consider not having a fee, drivers and fuel and all those things, I am sure delivery costs would dramatically reduce.

Mr Balding: Dark Kitchen or the Cloud Kitchen. The restaurants do not have to be in high rent, high traffic areas. They can be out in the sticks like in Mitchell making food cheaper and not just delivering it cheaper.

MR PETTERSSON: How does the delivery time compare between the two? I assume you have ordered enough burritos from a land-based service and you have some comparison.

Mr Rucinski-Stanek: Sure. Again that is also hard to say until it is a full service.—

MR PETTERSSON: But in the experience you have had so far?

Mr Rucinski-Stanek: In my trial it was really quick. So I remember the first drone delivery I got I think my burrito was delivered within two to three minutes. That was a pre-prepared burrito, but when it was made fresh it was in the seven to 10-minute range of delivery time. Again, that depended on what time of day and stuff, but it was really efficient.

MR PETTERSSON: How does that compare to the traditional land-based delivery? Are you getting two-minute, 10-minute deliveries with Uber Eats?

Mr Rucinski-Stanek: Uber Eats? No, that is half an hour.

Mr Balding: It can be that long, yes. Or longer.

Mr Rucinski-Stanek: Yes, depending on what you are getting. If they are doing pizza, you have got to cook it and all that sort of thing. Burgers and stuff like that.

Mr Balding: Yes, the incredible speed of putting together a fresh food item and getting it delivered to your door within minutes is pretty incredible, rather than having to prep it at whichever restaurant it would be at and then deliver it by car following traffic and normal roads. It would definitely take a lot longer with Uber or any kind of vehicle delivery system.

Mr Rucinski-Stanek: Yes, they have got their shop front to maintain and keep clean and whatever. They just have their kitchen closed. It is cheaper and quicker for them to do everything.

MS ORR: Bonython against Drones said they surveyed a lot of people in Bonython and doorknocked and so forth. As a resident of Bonython, did you ever get approached by them?

Mr Rucinski-Stanek: No, I did not.

MS ORR: Were you aware they were doing their surveying?

Mr Rucinski-Stanek: No, I did not know about the surveys. I am not sure how they did it, if it was random or they just had a spot. But yes, I was never—

Mr Balding: Maybe you were at work.

Mr Rucinski-Stanek: Yes, probably I was at work maybe for what time of day they did it.

Mr Balding: Our approach was just to go on Facebook. We do not like to harass people doorknocking. But, yes, it would have been nice to actually get some local opinions. There were only 150 people in the trial so we would not have been able to find out who they were in most of the suburbs anyway, so.

Mr Rucinski-Stanek: So we tried to keep the Bonython for Drones page open. So everyone could come and go as they pleased. It was free for them to come and learn and be part of any side they chose.

THE CHAIR: Thanks for attending today. You will be sent a copy of the draft transcript to make sure it accurately reflects what you have said. Thanks to you both for attending and we will see how this all plays out in the future.

The committee adjourned at 11.01 am.